VALUE ADDED – THE EDITOR IN DESIGN AND DEVELOPMENT OF ONLINE COURSES

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INTRODUCTION

The editor has traditionally played a key role in the design and development of instructional and educational materials. As the Web and the technology and processes for delivering instructional materials on it have evolved, so too has the editor's role in course design and delivery. The dynamic nature of the Web and the explosive growth of user-driven collaborative applications such as blogs, wikis, and social software – the Web 2.0 – have expanded the scope of most editors' roles even further. The typical web editor in education has a broad and changing range of responsibilities, from editing and verifying course content to evaluating the efficacy of online instructional tools, from unsnarling copyright issues to testing and applying new multimedia applications. One aspect of the editor's role, however, has remained unchanged in the course development process – the editor adds value to the course development value chain by improving course material quality, enhancing students' learning

experiences, and ensuring that course-quality standards are set and maintained for the delivering institution.

Our model for defining and studying the online editor's role in the course development process is the School of Business at Athabasca University (AU). The School of Business has taken a leadership role in delivering online distance education courses at AU, by adding online features for existing print-based courses, converting print courses to online formats, or designing and developing new courses for exclusive web delivery. The multimedia instructional design editor (MIDE) is a key member of the School's online course design, development, and production team. The job title, MIDE (and the particular configuration of skills and duties associated with it), is unique to the School of Business, combining, as it suggests, the tasks of integrating multimedia instructional components into online course materials, applying instructional design principles, and editing course materials. Although the MIDE is unique to Athabasca University's School of Business, many of the duties and responsibilities of the job are typical of other online course development projects.

The School of Business has developed the MIDE role to achieve a number of course development objectives. To ensure that standards of product and pedagogical quality are achieved (an institutional objective), the MIDE is responsible for editing course materials before they are delivered to students. In addition, the MIDE applies instructional design principles and strategies to online courses and course materials. Many School of Business courses were instructionally designed for print-based delivery, so converting them for online delivery has raised a host of instructional design issues. Other School of Business print-based courses make use of some online features; the MIDE assesses the pedagogical value of multimedia components and online interactivity tools, and develops or incorporates them in each course.

The MIDE's role adds value to the School of Business' online course development process in three ways: first, by linking other participants in the value chain, and so increasing the effectiveness and efficiency of the entire process; second, by increasing the ability of value chain participants to produce effective online learning experiences; and third, by providing a measure of quality control to ensure that online courses are consistent, technologically innovative, and pedagogically sound.

DISTANCE EDUCATION AND THE ONLINE INSTRUCTIONAL ENVIRONMENT

School of Business courses are delivered at a distance. Course materials for distance education, whether online or print, "take a learner-centred approach, rather than the traditional content-centred approach of textbooks" (Swales, 2000, p. 1). This learner-centred feature enables students "to become involved and motivated by the materials and to take ownership of the skills and knowledge that they acquire" (p. 1). It also means that distance education course materials are a key to motivating, engaging, directing, and supporting students, which makes the course editor an important contributor. The hybrid role of the MIDE is particularly well suited to a distance delivery model, especially when courses are delivered online.

In online delivery, the *learning environment* becomes a particular and important consideration. Kuboni (1999) notes that the term learning environment has emerged "as one of the key metaphors associated with teaching and learning through the new telecommunications and computer-networked technologies" (p. 1). As a context in which learning takes place, the online learning environment has several features: it encourages a reduction in the emphasis on the didactic role of the teacher, while emphasizing collaboration; it enables the development of process skills and knowledge building, rather than information and knowledge acquisition; and it supports collaborative group activities (Kuboni).

Like other departments at AU, the School of Business has faced a number of challenges in developing an online learning environment that delivers all of these envisioned features. Building the tools that support online collaboration and self-directed learning requires resources and time, so logistical issues, such as resource acquisition and allocation, have a significant impact on course development, and on design considerations such as increasing the longevity, currency, and applicability of learning tools and materials. In addition, technology constraints and demands must both be considered in designing the learning environment; most students expect self-directed, web-accessible course materials and resources, online access to AU services (such as the registrar and the library), and the ability to communicate with other students, administrative staff, and faculty. Lastly, Athabasca University has built its reputation and student base on providing certain continuous-intake course delivery models (i.e., self-paced, individualized study; paced group seminars), and adapting these models to fit their new online environment requires some ingenuity. In response to all of these considerations, the

School of Business has built a learning environment in *Lotus Notes*® that is web-accessible and supports a range of collaborative applications and tools. The Notes platform provides an interface for accessing individualized study, self-paced courses and paced, grouped courses, as well as other AU web-based services and administrative and technical support.

If the online instructional and learning environment presents opportunities and challenges not found in conventional face-to-face or traditional distance delivery, so too do the multimedia tools used within it. Nunes and Gaible (2002) contend that multimedia is "the most effective and egalitarian of computer-based resources available." Multimedia, and the online learning environment that delivers and supports it, provides for "artful interaction between learners and content." As with conventional distance delivery practice, it is possible to offer "learning in different locations...for students working at different rates and levels, [as well as] repetition when repetition is warranted" (p. 95). Nunes and Gaible state that multimedia is especially well suited to "dynamic fields" and that "web-based multimedia content ware is itself dynamic" (p. 95). That multimedia and the online environment are dynamic seems an obvious conclusion when we imagine the myriad ways in which learners can interact with content in text, visual, audio, animated, and other forms, through graphic and other interfaces. This conclusion is reinforced by the online environment's possibilities for learner interaction with teachers and other learners, at any time, and from any place.

The Concise Oxford Dictionary defines the word "dynamic" as the opposite of static; it is the reverse of "stationary; not acting or changing; passive" (Thompson, 1995, p. 1,361). As dynamic entities, multimedia and the online environment offer opportunities for various kinds of interaction and active learning, and for "the chance to work with current and even cutting-edge knowledge" (Nunes & Gaible, 2002, p. 95). Rather than confine the design, development, and delivery of learning content to technical and production experts, it may be possible to "engage all stakeholders in the education system...in the development of multimedia learning resources" (p. 95).

The dynamic nature of the online environment, however, also presents unique challenges for course developers and editors. Web content, links, and interactive elements are always changing and require constant vigilance to maintain their currency. Moreover, taking full advantage of the many multimedia and graphic enhancements available in this dynamic environment comes at a price. A simple-looking but effectively designed multimedia tool often requires many resources, a

significant amount of time to produce and test, and increases the workload and knowledge level required of instructional, technical, and production staff to implement and maintain it.

The online environment has the *potential* for fast and easy interaction among diverse and distributed users, a fact that raises a number of issues about how this interaction is accomplished, when it is appropriate, and how it is managed. Similarly, although a myriad of learning experiences and opportunities are available through the online environment, questions of how much diversity to offer, what instructional purposes each tool serves, and how to manage the tools selected, also become important. The MIDE addresses these issues from a learner's (student's) perspective in both the multimedia and instructional design components of the job. More recently, as learners and instructors have become more skilled in using web-based collaborative (social) software and user-driven applications, and as online information sharing and communication has moved closer to the connectivity promised by Web 2.0, new questions have arisen about the pedagogical value and methods of providing learners and instructors with more choices and control over their learning environment and interactions, while adhering to instructional standards and goals. When determining the effectiveness of online learning and interactive tools and technology, the MIDE must consider all these perspectives.

These varied demands present great challenges for the MIDE, who must apply precise editorial and instructional design standards across the various course components. Increasing the number of people engaged in the development process and the number of times learning content is subject to revision or change makes it difficult to achieve and maintain control over these standards. Furthermore, the MIDE requires an ever-growing range of skills, as well as flexibility in defining the scope of their duties, to check and evaluate the diverse components that make up an online course, and faces a constant challenge in balancing the learning needs of students against technological and course production constraints and requirements.

COURSE DEVELOPMENT IN AN ONLINE ENVIRONMENT – THE ROLE OF THE MIDE

As a School of Business course moves from concept through production to online delivery, the MIDE guides the production process and plays an integral role in each stage of course development.

Multimedia Development

In their capacity as editors, School of Business MIDEs develop an intimate knowledge of the content of each course. They are one of the final links in the content chain, reviewing all online course components when they are ready to be integrated into the web-based delivery template. The MIDEs occupy a unique position in the design and development process, far enough along that they see a course in its entirety and can clearly identify good locations for using particular multimedia and interactive components, but early enough to develop and integrate those components and to explore new ideas for enhancing educational materials.

As a means of making course production more efficient, and in keeping with a general trend toward collecting and reusing effective multimedia tools, the MIDEs play an important role in identifying online components and tools that have widespread applicability for use in several courses. The School of Business is still exploring ways to store these components and simplify their use across an array of course materials; the trend at Athabasca University, and in online learning in general, toward storing and reusing multimedia applications, learning objects, and databases presents many choices and opportunities for research. The MIDE is a vital link in this research, working as a liaison between School of Business academics, production teams, and other departments throughout the university that are developing data and learning object storage strategies (e.g., the library and the Educational Media Development department).

Instructional Design

All new or significantly revised online courses are submitted to School of Business instructional staff for a preliminary assessment of their design, content, and learning objectives. At this point, the MIDE performs a cursory instructional design (ID) assessment of the proposed course. At this stage, too, a School of Business instructional designer also reviews the proposal and offers ideas to the course author for improving the course's instructional efficacy. However, as courses and their constituent elements often undergo significant transformation between proposal and delivery, the bulk of the MIDE's ID evaluation necessarily happens after the course has been written or revised, when it is submitted for editing and production. Although this strategy can shorten the amount of time available for evaluating and testing new ideas for ID and multimedia tools in a course, it is, overall, a good use of limited resources. New courses are reviewed by the School of Business instructional designer,

but existing courses (often high enrolment courses) that are being revised or converted for online delivery might or might not have had the benefit of ID at some point in their development (the School has only one instructional designer, but many new courses that require ID). In many cases, the content of a course has been revised regularly, but issues related to its instructional efficacy have not been systematically addressed in the revisions. This is where the ID role of the MIDE and its late application in the production process is especially useful in assessing and dealing with instructional quality issues, without returning a course to the beginning stages of development.

As part of their instructional design role, MIDEs also check and evaluate course design and layout for instructional efficacy, providing input to authors and production staff. The MIDE ensures that all resources are relevant, linked, and coordinated. It is essential that course components intended to present and deliver information are clearly differentiated from learning activities, which are designed for application or practice. The purpose of the learning activities must be clearly presented, and it must be obvious to learners what action the learning activities require, as well as how and where to obtain feedback. The MIDE also determines if the learning resources work, if they work as intended, and if the instructions for their use are clear. This function is particularly crucial with multimedia components.

While working with existing courses in the instructional design role, the MIDE reviews course components at a number of levels (Swales, 2000). At a course level, the MIDE determines if the course components support and conform to course objectives. At the unit level, it is essential that unit objectives support, build toward, and align with the larger course objectives. Each learning objective in each unit or lesson is assessed to ensure that it is clear, unambiguous, measurable, and related to the content in the lesson or unit. The MIDE determines whether or not the lesson and review activities, as well as technical elements such as multimedia components and interactivity tools, contribute to students' ability to meet the learning objectives of the course, and to see for themselves that they have done so. In online courses, as with traditional distance delivery, this "seeing" must take place in the absence of same-time and face-to-face interaction with a teacher.

Editing

The MIDE's primary role in course development is as an editor. In the online course development and production process, the MIDE provides

feedback at the same point as editors in more traditional course development models. The MIDE reviews all course materials and components, revising and, in consultation with course authors, clarifying content, ensuring that the text is grammatically correct, concise, and online-ready. As do all editors, the MIDE ensures that the tone of the course materials is appropriate for the audience, and helps learning to happen; the MIDE also checks that coauthored materials communicate either a consistent voice or a clearly defined set of individual voices, as desired by the authors and as is suitable for the content. Editors ensure that course materials and do not contain bias or plagiarism and that all necessary copyright clearances have been obtained. Finally, web-ready content is copy edited to ensure that all i's are dotted and t's crossed, and that the rules of grammar and punctuation have been correctly and consistently applied.

As editors, more so than in their other roles, the MIDEs serve as proxies for the learners who will work through all components of the online course. They ensure that the information about assignments, including instructions to students, assignment questions, guidelines for assignment marking, and examination guidelines, is correct, consistent, and readily available. Well-edited course materials anticipate and address learner concerns and needs for information, preventing work at the "back end" of the course delivery process (instructor and technical support assistance calls), and building student confidence in and satisfaction with School of Business online course materials.

ADDING VALUE – THE MIDE IN THE DESIGN AND DEVELOPMENT PROCESS

The MIDE, then, contributes to many aspects and levels of course design and development, and at each level affects the online-learning value chain. The effects of this contribution, however, are difficult to measure empirically. The MIDE works in the design and development component of the online learning value chain, between upstream logistics (described in earlier chapters as infrastructure for online learning, technology choice, and attributes of various media) and downstream logistics (to be discussed in subsequent chapters, and including learner supports such as tutoring, call centres, and electronic library and other digital resources). As such, the MIDE's contribution to the online delivery

process is perhaps best measured through their interactions with the other participants in the value chain.

In each role – instructional design, multimedia development, and editing – the MIDE is concerned with facilitating communication between the author and the learner, and between the author and the technical staff who create the multimedia tools and instructional technology used in course delivery. The MIDE explores new resources and opens lines of communication between the many participants in the design and development value chain, and looks for solutions to instructional issues that will satisfy technical staff, academic experts, students, and upstream and downstream support resources. The MIDE searches for and evaluates ways to enhance the overall instructional efficacy of each course, and constantly works to bring the various elements of the online-delivery value chain together as efficiently and effectively as possible.

But just as the MIDE brings together elements and participants in the value chain, they also add value to the course development process by enhancing the ability of other participants to produce effective online learning experiences. Rowntree (1990) refers to this role in course development as the *transformer*, "a skilled communicator who can liaise with any subject specialists whose writing is obscure, winkling out their key ideas and re-expressing them in ways learners will be able to understand" (p. 21). The MIDE helps authors to refine and distill the material they want learners to grasp, and looks for the best tools and techniques for presenting this material concisely and effectively. MIDEs review and evaluate each element in the content and design of a course, so they have an opportunity to share their expertise and knowledge with the course development team and to facilitate communication and knowledge sharing among authors, production and support staff, and technical personnel. This knowledge sharing benefits everyone in the process, and enhances the ability of all value chain participants to make an effective contribution to course development.

The MIDE's most important contribution to the course design and development value chain is quality control. This function has become more critical, and more challenging to define and maintain, as more courses have incorporated multimedia components and moved into the online learning environment, and as learners and course creators have gained knowledge and demanded more control over their learning environment and interactions. The MIDE plays a balancing act between ensuring that rigorous institutional, instructional, and aesthetic standards

are applied to learning materials, and providing learners and instructors with some degree of flexibility and control over their learning environment. McGovern (2002) points out that "trillions of words are published on millions of web sites [and] much of this publishing is of appalling quality" (para. 2).

On the surface, online publishing, which has eliminated the highly technical tasks of typesetting, printing, and distribution, appears deceptively simple. In particular, revising online material seems to be quick, simple, and straightforward. And in many ways, it is: open the source document, use a simple text editor, save the changes to the server, and every course can contain what Nunes and Gaible (2002) refer to as "cutting-edge knowledge" (p. 95). If consistent presentation and appearance were the only issues to address, this capacity for multiple participants to revise courses "on-the-fly" would be a serious enough concern for the MIDE. However, "technology is founded on the promise of automation" (McGovern, para. 4), and "you simply can't automate the creation of quality content" (para. 8). Putting poor content into the online learning environment can have especially serious consequences, both for students and for the delivering institution.

As editors do in any course development project, the MIDEs ensure that all course materials are complete and functional, and that they meet the instructional, aesthetic, and editorial standards established by Athabasca University and other educational and publishing institutions. With the course learning goals in mind, the MIDE critically evaluates course materials from the learner's perspective, and considers the learner's needs and likely responses to the information presented in the course. The MIDE ensures that all the pieces of a course work toward the same goal, and that the pieces fit together in a unified whole to provide effective instruction for students. By ensuring that the course materials delivered to students are of consistently high quality, the MIDE contributes to students' confidence in School of Business courses, removes material-based obstacles to their learning, and enhances Athabasca University's reputation as a credible, learning-centred distance education institution.

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